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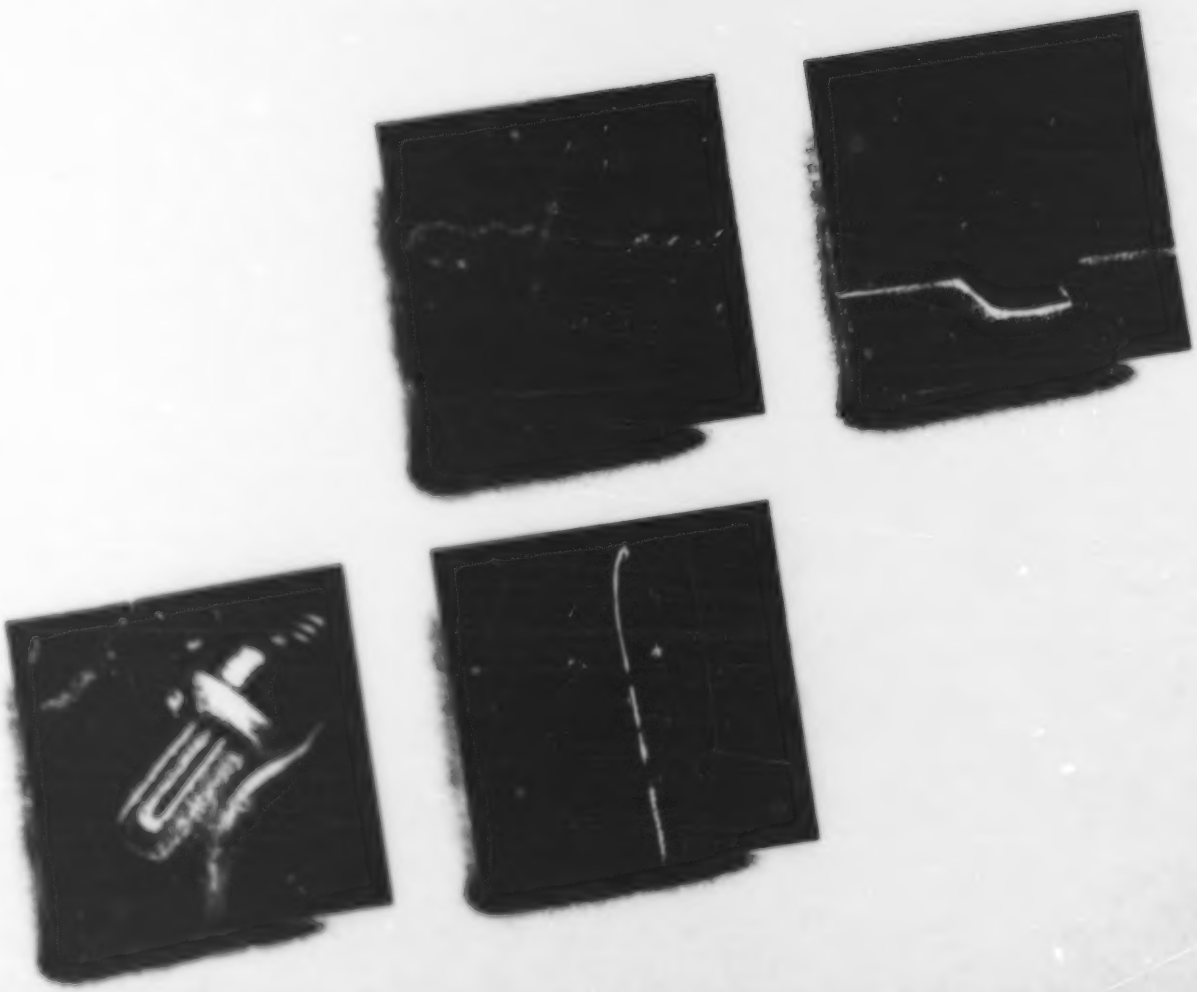
Nova Scotia Power Corporation

Seventy-First Annual Report
1990–1991



Letter of Transmittal

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July 19, 1991

His Honour
The Right Honourable Lloyd Crouse
Lieutenant-Governor of Nova Scotia

Sir:

I have the honour to submit herewith the seventy-first Annual Report of the Nova Scotia Power Corporation; together with financial statements for the fiscal year ended March 31, 1991.

Decisive, accountable leadership and mutual trust and respect among employees is the foundation of excellence at Nova Scotia Power. Such performance in the areas of finance, environment, and human resources produces the quality of service Nova Scotians require, while contributing to the development of the province.

As part of the Nova Scotia community, Nova Scotia Power continues to provide safe, reliable, cost effective electrical energy in an environmentally sensitive manner.

Yours very truly,

Joseph A.F. Macdonald, QC
Chairman

EXCELLENCE

The past 12 months represent a period of significant change and accomplishments within Nova Scotia Power -- progress that will have a positive impact on our customers.

Financially, the Corporation had a net income of $24 million, an amount greater than forecast which resulted from a relatively small increase in operating costs over the previous year, due to the efforts of all employees in reducing costs, higher than anticipated hydro production, and fortuitous fuel purchases.

Furthermore, we were able to accomplish these results without any reduction in the level of service to customers. In fact we have continued, during the past year, to accelerate our capital program of system improvements for existing and new customers.

These financial results enhance the health of the utility, and the increasing, though small equity will have a beneficial long term impact for our customers. Improving our equity position is one of our financial objectives. The utility industry is capital intensive, requiring a well-managed program of debt repayment. To this end, Nova Scotia Power has in place an orderly program to repay our debt at maturity. The financial community has expressed confidence in our financial management through their favorable response to our borrowings.

I am pleased by customer response to our Power Smart program which we introduced during the past year. We hope and expect that Power Smart will successfully encourage Nova Scotians to adopt a new energy ethic which requires that we do our best to eliminate waste of electric energy. Nova Scotia Power has, in this regard, established a new corporate direction, and demand side management, or conservation, has become a pivotal element in our business planning.

We must do more than promote the efficient use of energy, we must take a leadership role, and this is what we are doing. This thrust is being demonstrated through efficiencies in our generating stations, replacement of street lights with more energy efficient models and efficiencies in our own premises. At our Scotia Square head office, for example, we are reducing our electrical consumption for lighting by 50 percent.

We do not see Nova Scotians altering their lifestyle. Electricity is a key to achieving and maintaining our level of comfort, but we must be aware that energy efficiency is a key to environmental protection which itself is a key to maintaining our lifestyle. Concern for the environment has become a part of the day-to-day operation an long range planning for the Corporation. Nov Scotians want their environment protected. W have listened and we are acting.

The Point Aconi Generating Station is an example of our environmental commitment. This project, which will be one of the world's most advanced coal-fired generating plants, h undergone closer technical and environmenta scrutiny than any other project in the history c this province and has received approval at all regulatory levels. Construction of Point Acc which will be operational in late 1993, and Trenton No. 6, due for commissioning in the f of 1991, are proceeding well and will have positive impacts on both our environment an our economy.

In the latter regard, Nova Scotia Power continues to play a prominent role in contributing to the economy of this province. Last year our purchases totalled $525 million, which $373 million, or 71 percent was from Nova Scotia manufacturers or suppliers.

We are in a decade that will present challeng in the areas of energy supply, energy demand environmental protection, finances, customer service, communications, human resources, internal services, occupational health and safe technology, and research and development. B given the efforts demonstrated by our employees in the past, I am confident that th challenges will be met for the benefit of all N Scotians. We will be effective — that is our pursuit.

Q In the statement of our four corporate values, we say "We strive to be a leade in the energy sector..." Wh exactly does that mean?

Louis Comeau
President and
Chief Executive Officer

A Leadership is about vision, being pro-active, leading the way. When you're talking about leadership, you're not talking today — it's looking ahead to where you'll be in 10 years, in 25 years. It's about being the best.

Q Where does it come from — can leadership be developed, or does it occur naturally?

A In my own view, it's an environment you create that allows it to happen. That's what I've been struggling for since I've been here. I can't design a plant. I'm not a lineman. But I can lead people to be pro-active, decisive, accountable leaders. This involves some risk-taking, and that's challenging in a utility. As a supplier of a necessary service, we are very much in the public eye. All we do becomes magnified as a Crown Corporation when governments around the world are viewed with cynicism, and this makes the organization cautious about risk. But I've been lucky, because I have bosses who believe in excellence. The Board, the government — they have supported our goal of leadership. Now, in the case of a utility, leadership is essential in human resources, in technology, in finance, and in the environment.

We can't spend millions on R&D...But what we do is make critical decisions.

Q Are we reaching this goal, "to be a leader in the energy sector"?

A Certainly, in some areas. In technology, in the environment, in human resources. Of course you can't do everything — you have to balance. We are a small utility. We can't spend millions on R&D like the large utilities do. But what we do is make critical decisions. I'm thinking of CFB technology: we did some research in the late 70s and early 80s, culminating in 1988 as Point Aconi. We were making decisions for a 165 megawatt unit based on a 96 megawatt plant (which was at that time the largest existing). It has been demonstrated that we made the right decision. We closely monitor research projects, we participate in some research (we're quite aggressive in coal research, of course), and we make decisions.

In human resources, we have shown leadership. Our productivity improves, our values and cultural change programs are evidence of this. This has provided better customer service. You know, we have the same number of people as ten years ago, while the number of customers they serve has grown significantly in that period of time. I know, of the utilities in New York, New England, and Eastern Canada, that we are as progressive, and in many cases more progressive in the area of human resources. We completed our Values training this year, and thanks to the unions we have no major issues. They've worked with us, and now there's give and take. And we had a very good financial year, in spite of the very real concerns we had with oil prices. When prices jumped to 40 dollars a barrel, I worried that we could lose 25 or 30 million dollars. But we spent a lot of time on finance — I asked every employee to control whatever possible, and they responded, and we are ending with a surplus of $24 million. Since 1978 we haven't issued a United States bond, and last fall we filed a prospectus. We were able to do, very successfully, a 300 million dollar bond issue in the U.S. This demonstrates the confidence U.S. financial houses have in us. We have been a leader in the environmental area. We were among the first, with PCBs, to go *beyond* the regulations and get rid of them all. Our osprey relocation program is the widely-used model. No one has a better clean-coal program than us in Canada.

Q Human resources has always seemed a primary focus of yours. Why is that?

A I believe in people, in the sense that you achieve your goals through people, and people only produce those results when they feel good about their work. Over 25 years in management, that's been my experience. And everywhere it's the same.

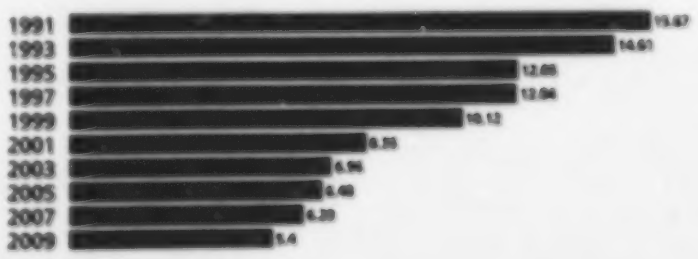
Q Where do we go from here?

A You'll see the same issues facing all utilities in the 1990s. Of course the environment is the major issue, and rightly so. The environment was a challenge for us this year. Not because we didn't do the right things, but because some people didn't believe we were doing the right thing. So public participation is becoming a bigger part of our planning. We have a very aggressive emissions control program — I mean really, we're going to cut emissions in half by twenty years time from where we are now. We are changing the consumer's thinking on energy, developing an efficiency ethic. It's good business sense. The customer who participates in energy efficiency wins, and society wins because there is less energy demanded and generated so the environment improves. But the Corporation is also a winner, because we have to finance less expansion. Of course, there will still be some need to expand, and this raises another area of concern: the financial side of the company. We have to continue to improve our equity. Another issue that utilities are going to face, in my view, is reliability. There are more gadgets and computers in businesses and homes, and reliability is quite an issue. Nova Scotia Power has a history of leadership in reliability, at 99.93%, but we're going to have to spend more money on the system to keep it from deteriorating.

But at the end of all that, where are we going? We are going to be the best of our size. We will be number one in safety, and in efficient, effective delivery of our product. Nova Scotia will grow if industry grows, and we have a great role to play there. We must make sure energy prices are very competitive. We don't provide dividends, you know, our profit does not go to the Board or to Louis Comeau — the dividend we have for Nova Scotians is the lowest possible rates. We will accomplish this through our people. I can tell you, as well, the mosaic of this company is going to change. We are going to see visible minorities, we're going to see more women in management. That's a challenge, and it's something we have to pay attention to. It might take longer, but it will happen. It's part of being the best.

Rate of SO2 Emissions

Grams of SO2 per kilowatt hour



APPLICATION

Last year we provided 395,577 customers with 8,674,362,942 kilowatt hours of power. And that service was 99.93% reliable.

This level of performance is no coincidence: it results from a system of advanced technology and thoughtful application. At our six thermal stations, computers automatically maximize operating efficiency, while technologies like low NO_x burners and design elements like low velocity water intakes maximize environmental efficiency. More than 2.1 million tonnes of coal, 3.6 million barrels of Bunker C oil, and 1.1 million gallons of diesel fueled the stations. Our nine hydro systems are naturally efficient — at Wreck Cove (two thirds of our hydro generation), system availability was 97.4% for the year. Design applications like fish passageways have also made our hydro operations unobtrusive in their environments. Power was delivered to the customer through 5004 kilometres of transmission lines, and 24,243 kilometres of distribution lines.

Teams from Yarmouth to Point Aconi manage this service, supported by state-of-the-art telecommunications, monitoring and control, and administrative systems. Computer-operated mailing and printing equipment handles high volume jobs quickly and inexpensively, and in the records centre, technology has made blueprint recording cleaner, more convenient and environmentally sound.

The latest copier/printer in the centre uses no chemicals, just toner on recyclable bond paper, copies documents of any length, and folds them.

Gerry Lethbridge

Vice President of Engineering and Production

Leading edge telecommunications improves the speed and accuracy of our service. The new mobile radio system is central processor based, allowing individual contact with field staff province wide, and reducing interference. And Nova Scotia Power is among the first to extend telecommunications' reliability and flexibility with fibre optics, rather than microwave.

Of course, there's still room for efficiency improvement — right down to the very facilities in which we work. This year we continued our energy efficient applications in the Ragged Lake Energy Control Centre, using heat from equipment towards space heating; and at the Eastern Zone headquarters in Sydney and Head Office in Halifax, energy efficient lighting will save 1.6 gigawatt hours per year of energy, on top of other energy efficient applications like heat pumps.

If we can trap methane escaping from a coal mine, as combustion air, we reduce methane emissions by 40,000 tonnes a year.

For Nova Scotia Power to continue top level performance into the future, today's system and technology isn't enough. Last year we invested 325 million dollars in new generation and associated transmission. In 1990-91, six hundred thousand dollars were spent on research and development in areas like coal gasification, sorbent slurry injection, steam temperature control, ground source heat pumps, and using mine methane as combustion air for a generating station.

Gerry Lethbridge is Nova Scotia Power's Vice President of Engineering and Production. At year end, he discussed the role technology plays in our performance.

Q One of our Corporate Goals is to make effective use of advanced technology and innovation to produce quality results. Are we achieving this goal?

A Certainly. We have been, and continue to be a "state-of-the-art" utility in several areas. There's no question on fluidized bed — we put in the test rig at Point Tupper, and at that point it was one of the first in Canada, and undoubtedly first among utilities. Point Aconi will be one of the cleanest coal-burning plants in the world when it's commissioned in 1993. The tidal plant is the only one operating on the continent. We have the first digitally controlled microwave system among utilities, for more precise telecommunications. One of the more interesting things we're doing currently is a study on methane recovery. Methane is a greenhouse gas 20 to 40 times more effective as a heat trap than carbon dioxide. If we can trap methane escaping from a coal mine, and introduce it to the boiler of a generating station as combustion air, we reduce methane emissions by 40, 000 tonnes a year. That's equivalent to 3 million tonnes of CO_2 a year — it would offset carbon dioxide emissions of several thermal stations. We don't know of anyone else who's doing this, and our work in the area has been getting a lot of attention. Overall, our menu of advanced technologies that are not yet in service is as current as any.

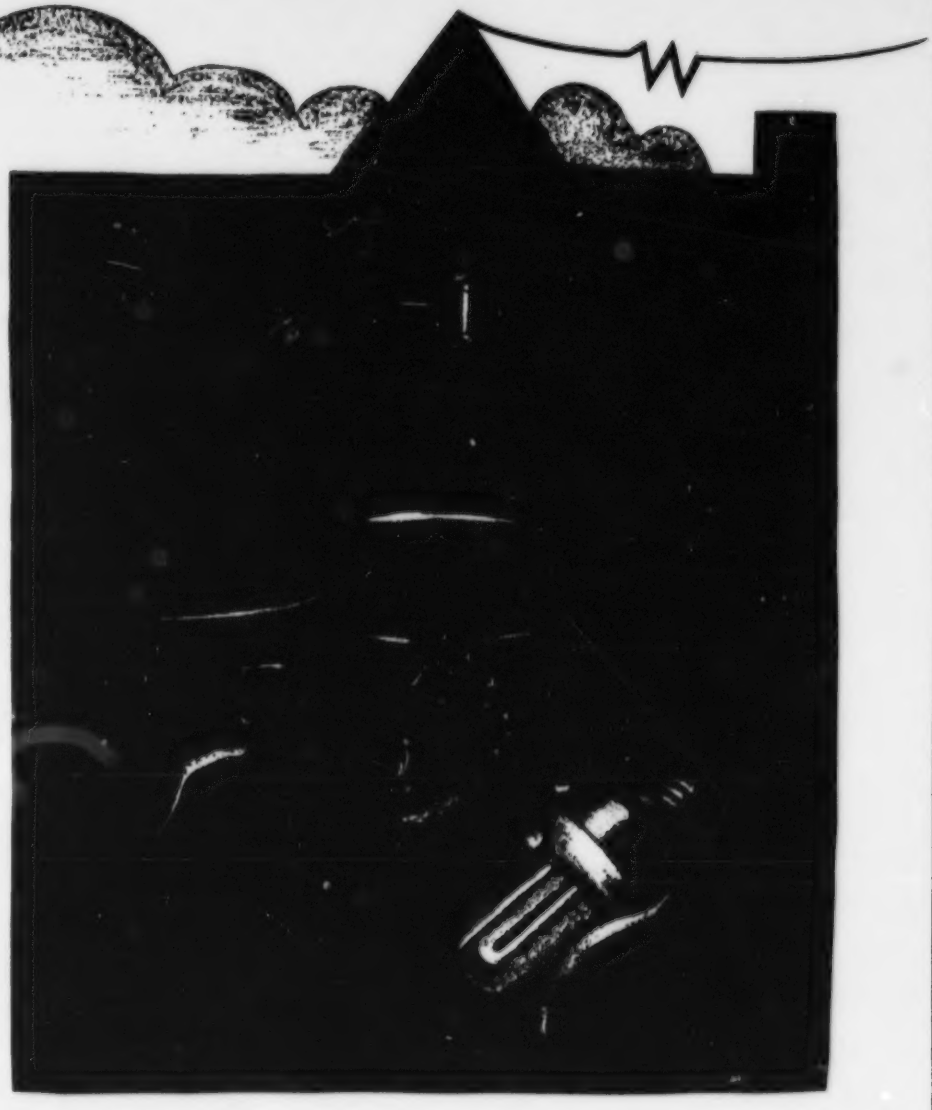
Q What's on the technology menu?

A We have to go towards efficiency of burn rates. There are new combustion systems, like Integrated Gasification Combined Cycle (IGCC), which generate the same amount of electricity as conventional systems, but use less fuel. In our plants today, two thirds of the energy of the thermo-dynamic cycle is lost. Both IGCC and Pressurized Fluidized Bed technologies improve efficiency by 15 to 20 per cent. We're involved in a feasibility study of IGCC with the Coal Association of Canada, and we have our own 10 year program for developing an IGCC plant in Nova Scotia. We're also looking at a demonstration project at one of our existing plants which involves the reduction of emissions of sulphur dioxide and oxides of nitrogen by the injection of a slurry of limestone into the boiler. The cost of this system will be significantly less than for a "scrubber" system. Something else you'll see further down the road is fuel cells. Fuel cells work by a chemical reaction, similar to

a storage battery, but with no waste product other than water. They use hydrogen and oxygen -- the trick is that there isn't a great supply of hydrogen. But fuel cells also promise high conversion efficiency.

Q All of this research and development takes money. How do organizations come up with the funding?

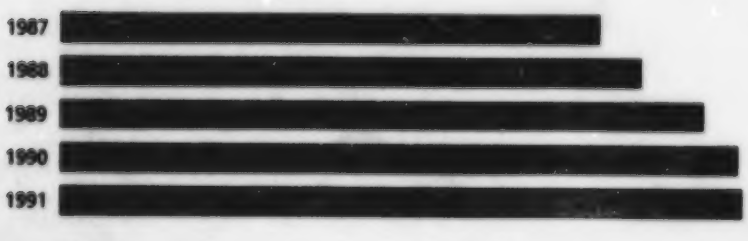
A Well, a lot of the work that's done is co-operative, between governments, associations, and the industry, with varying contributions. Everyone does what they can. Now there's an emphasis on technology transfer, and we have different endeavors underway in this area. China is dependent on coal, and developing nations can't keep up with advances in generation technology. So we took an engineer from China's National Coal Board on a year's secondment. She worked in a number of areas of the corporation, although the emphasis was on efficiency. I think she was very pleased with the experience. Earlier this year we were involved in a conference on technology transfer to developing countries. The industry organized it along with the federal government, the main concern being global warming. We have more advanced technologies now to be more efficient in our generation, and if we can just show nations without these technologies, they will become more efficient and might buy the hardware. That would reduce emissions, and allow them to produce energy at less cost. Efficiency and technological initiatives take more than money, though. You have to develop an environment with these countries where initiatives are easily developed and used.



Q How do you do that?

A There are two things that contribute to a "state-of-the-art" performance level. There's the awareness part — you must maintain among your people an awareness and understanding of research and development activities. Maybe extensive knowledge and competence in some areas. That's one aspect. The other is the environment. People who know about these activities, and know how it can be applied to our company need to be able to communicate that to the decision makers. If someone working in a plant has an idea of how efficiency can improve in that operation, they need to be able to move that idea upward into the decision making process. That's the environment we're working to create here.

Electric Energy Production
GW. h



U T I L I T Y

In The New American Roget's College Thesaurus, *"effective", "efficient", and "productive" are listed as synonyms for the word "utility".*

At this utility, as our productivity increases, our service becomes more effective, both in cost and quality. How do we increase our productivity, our "utility"?

Working in an environment of individual accountability involves us more deeply in our work. Constant testing and questioning of methods allows the best ideas to be used. This environment is essential for us to satisfy the growing needs of our customers. Last year, total customers grew by 6207, and 57% of that was in the domestic all-electric category. Yet our customer to employee ratio has improved over the last five years. Two thousand five-hundred fifty-six employees served 395,577 customers this year. That's like having more than 395,000 clients — everchanging clients — at all times. How do we serve more customers with the same number of employees without losing some quality of service?

Eliminate any obstacles to performance. No aspect of the organization is sacred.

We constantly consider how to work "smarter", instead of working in larger numbers or working harder. Eliminate any obstacles to performance — various rules or systems. No aspect of the organization is sacred. So far this has been very successful. Our reliability of service is among the highest in North American utilities, at 99.93%. Now we have to continually increase our productivity to maintain this level of service in the face of growing customer needs.

Dave Driscoll
Premises Manager and Policies and Procedures Committee Chair

One big step towards eliminating obstacles occurred this year: reducing our bureaucracy of policies, procedures, and guidelines. At the 1989 Annual Management meeting, a committee was formed to determine which policies and procedures were fine and affected all employees, and which were either redundant, obsolete, or should become the responsibility of a particular department. David Driscoll, Manager of the Premises department, headed up the committee of 22 managers representing most areas of the Corporation. Dave was well suited to the task, having a wealth of experience leading various organizations and committees.

Q What was the problem that led to the committee being formed?

A Well, there were over 100 policies in place. Basically, the list had been added to over the years, and no one checked each addition for duplication or redundancy. And every possible situation was accounted for. So if you were interested in policy on absence in general, you'd be reading specifically about illness, and death in the family, and vacation, and special circumstances.

Q How did the committee approach this problem?

A It's hard to get 22 people to agree on anything, so the committee was organized as seven task forces. The areas were personnel, finance, industrial relations, employee development, security, executive management, corporate service and transportation. Each task force reviewed policies in that area, and spoke to the managers in those departments. They determined which policies affected all employees, and brought their recommendations to an Audit Committee of three people. We got the number of policies down to 14, and we presented this at the 1990 Annual Management meeting. Since then, a couple of areas have been identified that needed to be included that hadn't been, like environment.

Q Is there any concern that this is too great a reduction, that a company this size won't operate smoothly with so few formal policies in place?

A No, no — all of those policies aren't gone, they are back in their area of responsibility. A policy on Retroactive Salary Adjustments, for instance, is back with Personnel. If you're interested in that subject, that's where you look. The overall, corporate policy is that compensation will be fair, equitable and competitive. Any policies that were eliminated were obsolete, redundant, duplicated. And there are the procedures and guidelines outlining how policy is acted on, which are also being revised as the second phase of the committee's work. Again, most procedure will be left with managers.

Q As policies are added to the corporate list, won't we eventually end up with another thick binder?

A Well, I am recommending there be a group to maintain policy and procedure. When new policy is required, or employees identify redundant or cumbersome policy, any decision is carefully considered. As much as we want to identify the obsolete policies, we want to identify those that are needed and don't yet exist. So there will be this channel for employees to constantly improve their own regulation.

Customer Growth

BALANCE

Nova Scotia Power's Environmental Objective is: ***to conduct our business in a manner which is respectful and protective of the environment.***

Our program to reduce atmospheric emissions is highlighted by the Point Aconi Generating Station, where circulating fluidized bed combustion technology will lead to dramatic reductions in sulphur dioxide and nitrogen oxide emissions. Lower SO_2 emissions will also occur at our other coal-fired plants and at the Tufts Cove oil-fired plant.

The Corporation continues to make significant progress in other areas which have environmental impact: improvements for fish habitat near our hydro plants; greater use of manual and mechanical cutting on our rights-of-way and reduced use of herbicides as part of our vegetation management program; improved energy efficiency which minimizes environmental impacts, as well as improvements in all other areas of our operations that have environmental impacts, or potential environmental enhancement. Terry MacDonald is the Vice President of Planning and Environment for Nova Scotia Power. At year end, he discussed Nova Scotia Power's options and opportunities for the future.

Terry MacDonald
•
Vice President of Planning and Environment

Q As a fossil fuels-based utility, Nova Scotia Power has often been the object of public criticism from environmental groups. What are we doing in the areas of this criticism?

A Well, one of the big issues is our use of fossil fuels, and unfortunately there are no easy answers there. In Nova Scotia we have an abundance of coal, which is not a naturally "clean" fuel. So what are the alternatives? We don't have the big river systems other regions do — we've essentially developed all of our hydro potential. We know the available resources in biomass. There are about 40 megawatts in peat, and about 170 in wood. We have tidal, in fact the Annapolis Tidal station is North America's first. But to generate on a large scale with tidal would be expensive, because tides are unchangeable. When our load peaks at supper time, if the tides aren't co-operative it won't meet our demand. We'd have to re-time: either directly with our own alternative capacity, or by giving another utility our excess generation from high tides and then use the generation they previously stored at the time of our peaks. Of course, they would then need to have the capacity available in excess of their own requirements.

A lot of these things weren't legally required of us, and in many cases there was no large public outcry. It's just a case of "the right thing to do".

Similarly, with wind and solar, it isn't always windy or sunny, although we also use small scale wind generation at Wreck Cove. We know there are 40 to 60 megawatts available in municipal solid waste, but there has been great public debate about that this year. With nuclear, there has also always been debate about its acceptability. That aside, the smallest available commercial units are too large for our system. People think Point Aconi is a big plant at 165 megawatts, but the Point Lepreau (nuclear) unit is 630 megawatts! Our installed capacity, that our transmission and distribution system supports, is 1964 megawatts. If we put 630 megawatts — one third of our total capacity — in one unit, what happens when that unit is down? We could possibly participate in a nuclear unit with New Brunswick, but the installed capital cost is almost twice that of coal fired capacity — that would double our debt, but could be long term cost-effective.

Of the fossil fuels, natural gas is not yet available in Nova Scotia and we have been reducing our dependence on foreign oil for reasons of price and security of supply. That leaves coal, a fuel which has been good to Nova Scotians from the perspective of security, economics, and reliability. Our challenge is to ensure it is used efficiently and in an environmentally sound manner.

So, in the end, we are using any naturally "clean" resources we can, and we are attempting to balance reliability, cost-effectiveness, financial considerations and environmental responsibility in managing our system for the best end result. Really, over the years we've been involved in a number of initiatives that were very positive environmentally, and I don't know how much attention they've received.

Q For example?

A We were the first Canadian utility to address nitrogen oxide emissions: in the mid-70s, when we built our off-oil units, we used low NO_x furnace designs. We were the first to eliminate all high level PCBs from our system. Our osprey nest relocation program became a model for other provinces' programs. We are the first utility in Canada to move forward from conceptual planning to construction with full sulpher dioxide control in a base load unit. That, of course, is Point Aconi. In the area of oil-fired plants, we installed magnesium hydroxide systems at Tufts Cove. When our hydro systems were built, fish and their habitat were not much on the minds of most people, but as situations and expectations evolved we improved the situation with fish ladders and passageways. When Trenton 5 was built, it was state of the art in particulate control. A lot of

these things weren't legally required of us, and in many cases there was no large public outcry. It's just a case of "the right thing to do". Any concern that is brought to our attention we investigate, and do what we can cost-effectively. Of course, as I explained earlier, some ideal solutions aren't economically feasible. You have to achieve a balance, always, in these matters.

Those are supply issues. We participate in research and development projects, on both supply and demand issues. On the demand side, there is room in our system to reduce consumption. Every business and industry intuitively wants to be efficient, and the potential to reduce demand relates to your inefficiencies. You have to find out what the inefficiencies are, what the cost of overcoming them will be, and who's responsible. In this province, electricity represents 18 percent of all the energy consumed, so we must address the issue in all sectors. We need to change people's thinking habits, to create a new energy efficient ethic, and that's what our Power Smart program is for. People in general don't think about the efficiency of any activity they're engaged in.

Q How, specifically, can we control the demand for energy?

A By becoming more efficient, and by changing when it's demanded — load control. We are trying to decrease customer energy use under the Power Smart umbrella. Most motors, lighting and appliances out there aren't the most efficient available. If everyone were to replace all of their inefficient lighting, appliances and equipment, that would be great, but who can afford to do it? So part of Power Smart is finding out which of these appliances are most cost-effective to replace: you make your money back from water heater blankets and low flow shower heads in a relatively short period of time. In business and industry, for example, decisions are frequently made based on a very short term return. In the domestic sector, return on efficiency investments is often not considered at all. Through Power Smart we're trying to tell people that some of their decisions that appear to be more cost-effective in the short term, have more efficient solutions over the long term. I'll give you a utility example: a gas turbine costs less to build than a coal-fired station, but a kWh of energy from the gas turbine fuelled by light oil will always cost more to produce. Beyond all this, however, some people are beginning to feel now that the extra cost is justified for environmental reasons alone.

Besides controlling how much energy is required, you can control when it's required, to some degree. We did a study and carried out a pilot project with water heater timers where you don't save so much energy, but you spread out its usage. Water heaters maintain a set temperature all the time, but you don't use hot water all the time. We measured how much hot water was used throughout the day, to find out when the heater would actually have to heat.

Q Essentially, then, changing the timing of energy use lets you install less generation capacity?

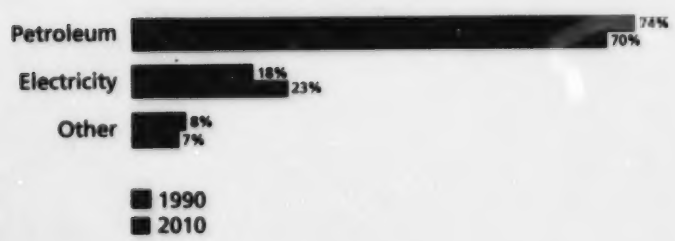
A Yes! A good analogy may be mass transit. At rush hours, you need 100 buses on the road. The rest of the time you need 50, so that's what you run — you don't run all 100 all the time just because you have them. If you could control the times people went to and from work — stagger the rush hour so that with fewer buses you could move the same number of people — you could reduce your spending on buses and perhaps highways! It's the same with load control. Water heater timers would be extremely expensive at this point. But there's another way we do control peak demand, and that's through interruptible load customers. Some of our larger customers have opted for our interruptible rates concept: they may be interrupted if generating capacity is insufficient to meet our firm load, and in exchange they pay a reduced rate.

In this way, we have already avoided the need to construct the capacity to accomodate 150 megawatts of existing load. Last winter there were days the demand exceeded 1800 megawatts. Our nameplate capacity is 1964 megawatts. Say we've got a unit down at Lingan, and a unit down at Tufts Cove; when demand is 1800 megawatts, well, we can't meet it. We could build another station to handle these occasional peaks, but there's another solution. We ask them (interruptible customers) to wait for the next bus. We have one of the highest percentages (8%) of interruptible customers among Canadian utilities.

You can sum all of this up in saying that we are identifying and overcoming our inefficiencies, and we're telling customers how they can do the same.

Energy End Use in Nova Scotia: 1990 and 2010

Comparison of total provincial end use energy distribution

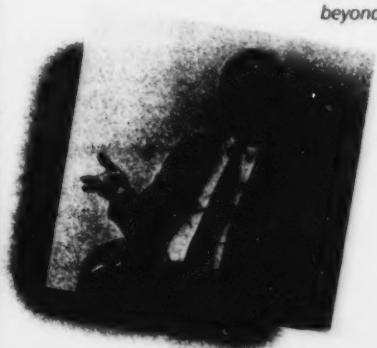


PERFORMANCE

As the province's energy requirements are steadily increasing, serving Nova Scotians with the greatest possible reliability for the lowest possible cost is going to require top performance. We've been developing a work atmosphere at Nova Scotia Power that encourages high productivity, efficiency, and effectiveness. These programs allow flexibility in some types of work to reasonably accomodate employees' personal situations. Through a cultural change program centred around Corporate Values we have been emphasizing the importance of positive behaviours and attitudes, mutual trust and respect, individual control and accountability.

While we are striving to help our employees achieve the very best results, we realize that Nova Scotia Power does not operate in a vacuum. We have a social responsibility to implement personnel policies and programs that will benefit those who have been denied equal opportunities for careers and career advancement in the past. We want our "top performers" to mirror the rich diversity of the Nova Scotia labour force, and to include, in particular, women, native people, the disabled, and visible minorities.

Excellence deserves recognition, and in 1990 the compensation system for non-union employees was revised to allow better monetary recognition of outstanding performance, beyond the normal salary increase for acceptable performance.



Jim Woods
Director of Organization and Employee Development

Jim Woods is the Director of Organization and Employee Development at Nova Scotia Power. He is pleased with the direction we are taking in these areas, and is prepared for the challenges of making it happen.

Q Jim, everyone knows and talks about the value of employees. What's different here at Nova Scotia Power?

A Lots of companies use the old cliché "people are our most important resource", but we are actually backing up our words with action. We've worked very hard to make this company a more humanistic company. And that's very difficult, because you're dealing with human nature. We have managers who have become very successful in their careers through their technical skills and track record of getting the task done. It's hard for these people to accept the fact that they must now put an equal emphasis on their relationships with people. This forces them to learn and practice a whole new set of skills — interpersonal skills.

We've been finding that when employees understand what makes someone different from themselves, and they see this person doing a great job, there's no problem.

During intensive workshops with all members of management, from President to Foreman, we've said "This is how we want you to act as a leader at Nova Scotia Power". Now that we all know what is expected of us, the next logical step is to make sure we have the necessary skills to do it... a major training commitment. Perhaps the most important skill of all is the ability to tap into the tremendous human potential of our employees. We must learn how to get their involvement and participation in the running of this company. There's a myriad of ways to do this, but they all boil down to the fact that we rent an employee's hands for a wage or salary: for the same amount of money we can rent their brain. We need the imagination and creativity of our people if we're going to be a truly great organization.

Q Sounds good. Is it working?

A Sure, it's working, and accountability is the key to success. It's one thing to tell people what you expect of them and make sure they know how to do it. It is quite another thing to make sure they actually do it, to hold them accountable. So accountability is a very essential ingredient. We want our people to have more freedom to act without constantly having to get permission from a higher authority, but at the same time, we will hold them accountable for their results. The kind of management style change we have implemented is a very complex one to police or monitor. It's not at all like issuing a rule. You can issue a policy that safety footwear must be worn on a work site. Either safety boots are worn or they're not. That's very straightforward and clearcut. But asking people to interact with mutual trust and respect? We have to police each other on that one. "Police", though, is not the right word for the new culture being created at Nova Scotia Power. We have to support each other as we change our behaviours and attitudes, and we have to be held accountable for making those changes. But yes, changes are being made. We are seeing a difference. I hear stories of people who've made *major* changes in how they interrelate with others.

Q Where did this way of thinking originate?

A At Nova Scotia Power it all started with Louis Comeau. There is no doubt in my mind about that, whatsoever. He's the guy who sits at every monthly Senior Management meeting and says "OK, what have you people done to improve the culture here?". It starts at the top, and that's leadership, and that's accountability!

Q How does all of this attitude and behaviour work concretely affect working at Nova Scotia Power?

A We believe that it makes work more enjoyable, challenging, and rewarding. It brings out the best in people. But this change to a more people-centred approach has also

allowed us to develop and implement initiatives like the Employee Assistance Program, job sharing, modified hours of work (or "flex time" as it's often called).

The Employee Assistance Program is of tremendous benefit to our employees. Years ago I read somewhere that ten percent of the work force have personal problems that affect their job performance, and I thought "well, the people around me must be lucky" because they all seemed fine. But of course, it isn't always obvious when a person is having marital problems or drinking problems or whatever the case may be. So this is something we do because we think it's right, because we all end up winners, the Corporation and the employee. Naturally, it helps the company to help an employee who would otherwise spend much of the work day distracted by personal problems, or half of the month off sick.

Job sharing and modified hours are two other programs that help employees, particularly those with family responsibilities. With job sharing, two regular employees who don't want to work full time split a job and all its benefits. So they can spend more time with their families, or perhaps they just don't need a full time salary and would rather have the leisure time. The idea behind flex time was to give employees some control over the hours they started and stopped work each day. This can be of great benefit to working couples who have to be concerned with taking and picking up children at daycare or looking after elderly relatives.

Modified hours is a variation on flex time that includes a compressed work period. We talked about flex time ten years ago, but we said it could never be implemented here because it couldn't be applied to everyone, for example, shift workers or those who directly serve our customers. More recently though, we came to the realization that we don't have to have only one system of hours at a company like ours. Our employees are responsible and accountable people. Surely they'll recognize and appreciate when the nature of their job prevents them from participating in the modified hours program. So we implemented modified hours of work for those who can avail themselves of it, and things are going great!

Employment equity is another program that's grown out of the cultural change. Has there been discrimination in Nova Scotia Power's hiring and promotion?

I don't think the company has *knowingly* discriminated against anyone, but that's one of the ugly things about discrimination — it can be "systemic" or unintentional. We certainly have a long way to go before we can say we have, throughout the Corporation and at all levels within it, an appropriate representation of females, visible minorities, disabled people, and aboriginal people. One would have to be extremely naive, though, to believe that we don't have our share of biased or racially-prejudiced people in this company. We just haven't thought about it. These are biases that have built up over generations.

Hiring for employment equity is very different. We've always believed in hiring the best applicant, but only certain groups have been applying for certain jobs. By certain scales of measurement, some applicants seem less qualified. Right now, there aren't many minorities applying for these jobs. Part of the reason for that is a lack of particular skills and training. If there have never been women line workers, how many women will decide to go into that trade? So we're soliciting the participation of minorities in the program, and trying to let them know how they can become qualified for various positions. It only stands to

reason that the more exhaustive and diverse a group you hire from, the better your chance of finding the "true" best candidate. This takes a long while to really pay off.

Q How can you expect to change something as deep-rooted as prejudice in your work force?

A We've started cultural awareness training with employees, and we're doing regular communication on the program, the groups it affects, why we're doing it. Education helps, and exposure to minorities helps. We've been finding that when employees understand what makes someone different from themselves, and they see this person doing a great job, there's no problem.

Q Why are we doing all of this?

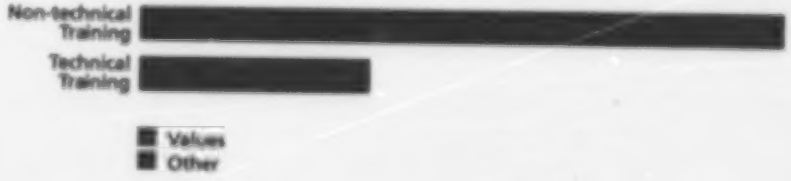
A Employment Equity is something we're doing because we know it's the right thing to do, it's something we simply must do. It's also good business. White, able-bodied males are a minority in Canada today. The majority, by a long shot, are the groups covered by employment equity. That's a tremendous pool of human potential for us to hire and promote.

With all of these programs that have come about as a result of our cultural change efforts, the bottom line is to make Nova Scotia Power a better company, a more effective organization, and a better place to work. If my boss trusts me, respects me, values my opinions, I become more committed to the work. The more committed our work force, the more productive they become, and our customers are the beneficiaries.

Q What more is there to be done?

A I think we will be doing a lot more in the areas of empowerment and teamwork. We've got to delegate more decision-making authority to the front-line employees. After all, the person who knows best how to do a job is usually the person who ends up doing it. Management must come to better appreciate that fact and give their employees more free rein to do what they think is best. The vast majority of Nova Scotia Power people are bright, well-educated, and responsible. Not only should we empower them as individuals, but we should be doing more to help them to work together in teams. We've got to get away from this boss/subordinate, hierarchial pyramid mindset and start thinking of work groups as empowered teams who are quite capable of meeting challenging goals without "the boss" looking over their shoulder and telling them what to do. So, I really believe empowered employees and empowered teams will be the way of the future.

Employee Development
Number of employees



Nova Scotia Power Corporation
Financial Report
1991

Financial Review

FINANCIAL HIGHLIGHTS

- Net income for the year ended March 31, 1991 was $24 million, an improvement of $3 million over the previous year.
- Revenue increased $33 million on sales of 8,634 GWh. A rate increase of 2.5% accounted for $16 million and increased energy sales accounted for $17 million.

FINANCIAL STATISTICS

for the year ended March 31, 1991, with four-year comparative figures

millions of dollars

	1991	1990	1989	1988	1987
Electric Revenue	$628.0	$595.8	$543.4	$502.7	$476.0
Total Cost of Operations	445.1	429.2	406.4	385.6	346.1
Fuel	220.8	225.1	206.2	199.1	173.4
Depreciation	63.2	60.0	58.9	52.6	48.4
Interest	166.5	151.9	155.0	151.8	147.4
Net Income (Loss)	24.0	21.0	(11.4)	(27.7)	(9.3)
Net Proceeds, Long-Term Debt	361.4	394.1	209.8	150.0	166.6
Additions to Fixed Assets	324.8	216.8	112.2	104.6	120.1

FINANCIAL OPERATIONS

The Corporation's positive operating income is the result of productivity improvements, an approved rate increase, and a favourable production mix.

The net income was favourably impacted by the Board of Public Utilities' approval of an average 2.5% rate increase effective April 1, 1990. This, coupled with a 2.7% increase in volume provided a positive change in our net operating position.

Electric revenue increased $32 million, or 5.4% over fiscal 1990. Additional sales of 464 million kilowatt hours helped in-province electric sales to rise $39 million or 6.7%. Out-of-province sales were down $7 million from last year.

Fuel costs decreased $4 million while power purchased increased $11 million compared to fiscal 1990. The decrease in fuel costs was the result of a favourable production mix with increased hydro production of 26% and higher power purchased at a cost savings over production cost.

Operating, Maintenance and General expenses increased by 4.1% over fiscal 1990 due to a general escalation of costs.

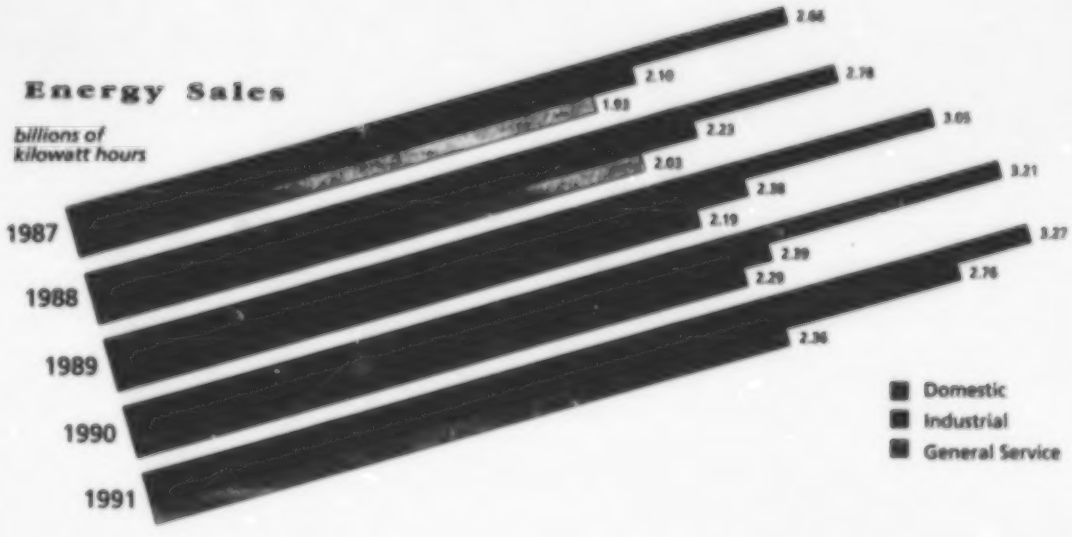
Interest expense for fiscal 1991 was up $14.6 million from the previous year. This increase was due to increased capital spending, additional foreign exchange costs and higher interest rates on short term borrowings.

CAPITAL SPENDING

Capital spending during fiscal 1991 amounted to $325 million. Major capital expenditures for the period included construction of the Trenton 6 Thermal Generating Unit and the Point Aconi Thermal Generating plant.

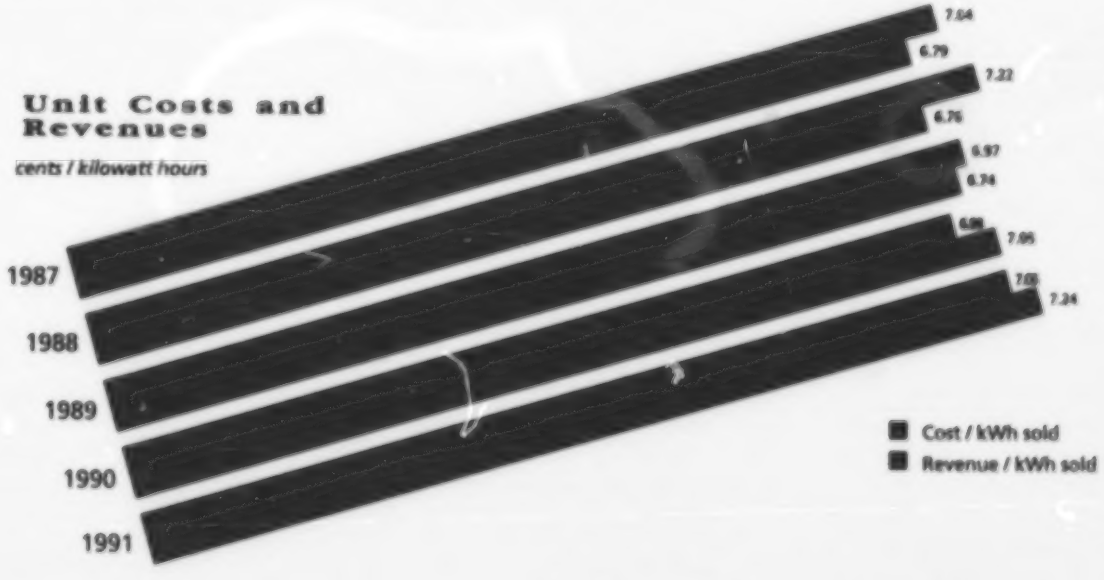
Energy Sales

billions of kilowatt hours

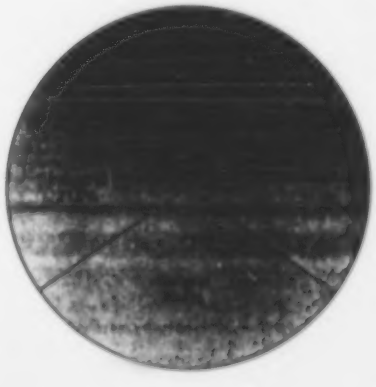


Unit Costs and Revenues

cents / kilowatt hours



Sources of Revenue



Uses of Revenue

Consolidated Financial Statements March 31, 1991

MANAGEMENT REPORT

All information, including the consolidated financial statements in the Annual Report of Nova Scotia Power Corporation, is the responsibility of management and has been approved by the Directors. Financial information presented thpughout this report is consistent with the data presented in the financial statements which are prepared in accordance with generally accepted accounting principles.

The Board of Directors carries out its responsibilities for the financial statements primarily through its Audit Committee, a majority of whom are not employees of the Corporation. The Audit Committee meets regularly with management, internal auditors, and the independent auditors all of whom have full and free access to the Committee.

The independent auditors are responsible for auditing the financial statements and giving an opinion thereon.

AUDITORS' REPORT

To the Board of Directors
Nova Scotia Power Corporation

We have audited the consolidated balance sheet of Nova Scotia Power Corporation as at March 31, 1991, and the consolidated statements of operations and retained earnings and changes in cash position for the year then ended. These financial statements are the responsibility of the Corporation's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with generally accepted auditing standards. Those standards require that we plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In our opinion, these consolidated financial statements present fairly, in all material respects, the financial position of the Corporation as at March 31, 1991 and the results of its operations and the changes in its cash position for the year then ended in accordance with generally accepted accounting principles.

Peat Marwick Thorne
Chartered Accountants

Halifax, Canada
May 31, 1991

CONSOLIDATED STATEMENT OF OPERATIONS AND RETAINED EARNINGS

for the year ended March 31, 1991, with comparative figures for 1990

millions of dollars

	1991	1990
Revenue		
Electric	$628.0	$595.8
Other	7.6	6.3
	635.6	602.1
Cost of operations		
Fuel for generation	220.8	225.1
Power purchased	15.9	4.6
Operating, maintenance and general	140.2	134.7
Grants in lieu of taxes	5.0	4.8
Depreciation	63.2	60.0
	445.1	429.2
Income before interest	190.5	172.9
Interest (note 1)	166.5	151.9
Net income	24.0	21.0
Retained earnings at beginning of year	27.8	6.8
Retained earnings at end of year	$ 51.8	$ 27.8

See accompanying summary of significant accounting policies and notes to consolidated financial statements

CONSOLIDATED BALANCE SHEET

as at March 31, 1991, with comparative figures for 1990

millions of dollars

Assets

	1991	1990
Fixed assets (note 2)		
Property, plant and equipment in service	**$2,068.4**	$1,957.1
Less accumulated depreciation	**681.5**	630.5
	1,386.9	1,326.6
Construction work in progress	**392.8**	193.1
	1,779.7	1,519.7
Current assets		
Cash	**.2**	.1
Accounts receivable	**64.9**	53.1
Unbilled revenue	**45.2**	47.6
Inventories at cost	**69.7**	65.8
Prepaid expenses	**2.3**	1.1
	182.3	167.7
Deferred charges less amortization	**22.6**	28.5
	$1,984.6	$1,715.9

Approved on Behalf of the Corporation

Chairman

President and Chief Executive Officer

CONSOLIDATED BALANCE SHEET

as at March 31, 1991, with comparative figures for 1990

millions of dollars

Liabilities and Equity

	1991	1990
Long-term debt (note 3)	**$1,566.1**	$1,479.1
Current liabilities		
Bank indebtedness	**14.7**	22.3
Accounts payable and accrued charges	**67.0**	54.8
Customers' deposits and accrued interest	**2.0**	1.8
Accrued interest on long-term debt	**65.7**	61.9
Long-term debt payable within one year	**202.6**	53.3
	352.0	194.1
Deferred credits	**1.4**	1.6
Equity		
Contributed surplus	**13.3**	13.3
Retained earnings	**51.8**	27.8
	65.1	41.1
	$1,984.6	$1,715.9

Commitments (note 4)

See accompanying summary of significant accounting policies and notes to consolidated financial statements.

CONSOLIDATED STATEMENT OF CHANGES IN CASH POSITION

for the year ended March 31, 1991, with comparative figures for 1990

millions of dollars

	1991	1990
Operating activities:		
Net income	**$24.0**	$21.0
Items not requiring an outlay of funds:		
Depreciation	**63.2**	60.0
Amortization of deferred charges	**11.0**	3.0
Working capital changes	**1.7**	(8.9)
Cash provided by operating activities	**99.9**	75.1
Financing activities:		
Proceeds from long-term debt less discount	**361.4**	394.1
Repayment of long-term debt	**(72.3)**	(278.3)
Sinking fund payments	**(20.9)**	(15.9)
Earnings on sinking funds	**(35.6)**	(32.2)
Cash provided by financing activities	**232.6**	67.7
Investing activities:		
Fixed asset expenditures	**(324.8)**	(216.8)
Increase (decrease) in cash position	**7.7**	(74.0)
Cash position (deficiency) at beginning of year	**(22.2)**	51.8
Cash deficiency at end of year	**$(14.5)**	$(22.2)

See accompanying summary of significant accounting policies and notes to consolidated financial statements.

SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

March 31, 1991

Consolidation

The consolidated financial statements include the accounts of Nova Scotia Power Corporation and its wholly-owned subsidiaries, Nova Scotia Light and Power Company, Limited and Eastern Light & Power Company Limited.

Regulation

The Corporation is a crown corporation of the Province of Nova Scotia engaged in the production and sale of electric energy, and is regulated by the Board of Commissioners of Public Utilities for the Province of Nova Scotia pursuant to the Public Utilities Act.

Revenue

The Corporation records an estimate of revenue for service rendered but not billed to customers.

Property, Plant and Equipment

The property, plant and equipment of the Corporation are recorded at original cost net of contributions in aid of construction. Expenditures for additions, replacements and improvements, which are comprised of direct labour, material, engineering, and related overhead costs, are capitalized whereas repairs and maintenance are charged to operations. Interest on funds used during construction is capitalized monthly at an interest rate which represents the effective cost of capital determined at the preceding fiscal year end. For property, plant and equipment replaced or renewed the original cost plus removal cost less salvage is charged to accumulated depreciation.

The excess of the Corporation's investment over the book value of subsidiaries and acquired power utilities was $30,197,000. This amount is being amortized on a straight line basis over terms ranging from 11–30 years. At March 31, 1991, the unamortized value included in the fixed assets of the Corporation was $6,935,000.

Depreciation is provided for by the Corporation on the straight line method, based on the estimated remaining service lives of its depreciable assets. The estimated average service lives for the major categories of plant in service are summarized as follows:

Functions	Average Life in Years
Generation:	
Hydro	62.0
Steam	32.3
Gas Turbine	28.7
Transmission	42.9
Distribution	30.8
General Plant	12.7

Changes in the estimated service lives of fixed assets and in the significant assumptions underlying the estimates of fixed asset removal costs are subject to periodic review. Such changes are implemented on a remaining service life basis from the year the changes can be first reflected in electric service rates.

Depreciation expense for the year ended March 31, 1991 includes $1,128,000 representing amortization of the excess of investment over book value of acquired utilities.

Foreign Currency Translation

Foreign currency amounts are translated into Canadian funds substantially in accordance with the temporal method of foreign currency translation, whereby assets and liabilities so denominated are categorized as monetary or non-monetary items as follows:

(a) Monetary items:

Cash, other current assets and liabilities, sinking funds and long-term debt are converted to Canadian dollars at the rate of exchange prevailing at the balance sheet date. The resulting differences between the translation at the original transaction date and the balance sheet date that relates to long-term debt less sinking funds are shown on the balance sheet under deferred charges.

These costs are amortized to operations over the remaining life of the debt issue or the period over which the related sinking fund will retire the debt issue, whichever is less.

(b) Non-monetary items:

Fixed assets originally acquired in foreign currencies are translated to Canadian dollars at historical exchange rates.

(c) Revenue and expense items, including interest expense on long-term debt, are reflected in operations at the rate of exchange on the date of the transaction together with any other exchange gains or losses realized from transactions affecting current operations.

Financing Costs

Financing costs are deferred and amortized on a straight-line basis over the life of the debt to which they apply.

Sinking Funds

Sinking funds, including those in foreign currencies, consist of securities and cash held by the Corporation and trustees for the redemption of certain debt issues. The Corporation may satisfy its annual sinking fund obligation by purchasing bonds of the Corporation on the open market at any time prior to the due date. Any discount or premium on such purchases will be recognized in income on the transaction date.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

March 31, 1991

1. Interest

millions of dollars

	1991	1990
Interest on long-term debt	**$205.0**	$194.1
Amortization of financing costs	**2.1**	3.4
Interest on short-term debt	**16.2**	4.3
Foreign exchange costs realized	**3.9**	4.6
Amortization of unrealized foreign exchange costs	**7.3**	(1.9)
Other	**.5**	.6
	235.0	205.1
Less		
Interest charged to construction	**26.9**	9.8
Sinking fund earnings	**35.6**	32.2
Other investment income	**6.0**	11.2
	68.5	53.2
	$166.5	$151.9

2. Property, Plant and Equipment in Service

millions of dollars

	1991	1990
Generating stations		
Fossil	**$723.6**	$716.2
Hydraulic	**257.8**	257.3
Transmission	**372.1**	315.7
Distribution	**594.1**	555.5
General plant	**120.8**	112.4
	$2,068.4	$1,957.1

3. Long-Term Debt

millions of dollars

	1991	1990
Bonds and debentures	**$1,657.1**	$1,475.1
Notes		
Province of Nova Scotia	**74.1**	17.3
Government of Canada	**37.5**	40.0
	1,768.7	1,532.4
Less payable within one year	**202.6**	53.3
	$1,566.1	$1,479.1

Bonds, debentures and notes payable, which are guaranteed by the Province of Nova Scotia, are expressed in Canadian dollars at balance sheet date. They are summarized by years of maturity and by currency in which they are payable in the following table:

	1991			1990
Years of Maturity	**Principal Outstanding**			**Principal Outstanding**
	Canadian	**Foreign**	**Total**	**Total**
1991				$ 20.1
1992	$ 162.2	$ 64.0	**$ 226.2**	240.9
1993	122.3	–	**122.3**	129.8
1994	12.5	–	**12.5**	15.7
1995	15.0	4.4	**19.4**	55.7
1996	103.7	–	**103.7**	–
1–5 Years	415.7	68.4	**484.1**	462.2
6–10 Years	174.4	139.0	**313.4**	209.0
11–15 Years	559.4	–	**559.4**	617.9
16–20 Years	4.6	86.9	**91.5**	142.7
21–25 Years	350.3	–	**350.3**	351.0
26–30 Years	215.7	–	**215.7**	150.0
31–40 Years	200.0	–	**200.0**	–
	1,920.1	294.3	**2,214.4**	1,932.8
Less sinking funds	293.4	152.3	**445.7**	400.4
	$1,626.7	$142.0	**$1,768.7**	$1,532.4

Currency payable:		
Canadian dollars	**$1,626.7**	1,380.3
United States dollars	**78.0**	89.6
Swiss francs	**64.0**	62.5
	$1,768.7	$1,532.4
Weighted Average Coupon Rate	**10.75%**	10.64%

Long-term maturities and sinking fund requirements, including those in foreign currencies translated to Canadian currency at March 31, 1991, are as follows:

Year Ending March 31	
1992	$202.6
1993	108.4
1994	27.0
1995	30.9
1996	118.1
	$487.0

4. Commitments

As at March 31, 1991, the Corporation was constructing generation, transmission and other facilities estimated to cost approximately $947.8 million of which approximately $419.1 million has been expended and an additional $262.7 million has been committed under contract. The remaining $266 million is estimated to be committed and spent in future years in order to complete the construction program.

5. Pension Plans

Regular employees of the Corporation are covered by the Public Service Superannuation Plan of the Province of Nova Scotia, which is a defined benefit multi-employer plan under which contributions are made equally by the Corporation and the employees. During the year, contributions to this plan of $5.5 million (1990–$5.0 million) were expensed.

The Corporation provides pension benefits to employees of acquired utilities, additional to those which are payable under the existing plans for years of service prior to acquisition. The Nova Scotia Light and Power Company, Limited Pension Plan and the Nova Scotia Power Corporation Supplemental Pension Plan, each serving a closed employee group, have been treated in accordance with generally accepted practice for defined benefit pension plans. Pension expense for these plans in 1991 totalled $1.6 million (1990–$2.0 million). Based on the most recent actuarial valuations completed as of December 31, 1989, extrapolations of both the present value of the accrued pension benefits, and the market value of the net assets available to provide for these benefits have been made to March 31, 1991.

	millions of dollars
Accrued Benefits	$58.0
Pension Fund Assets	39.4
	$18.6

Amortization Method	Annuity Method
Amortization Period	12 Years
Annualized Future Funding Contribution and Expense	$1.7

6. Subsequent Event

On April 8, 1991, the Corporation issued $300 million of sinking fund debentures in the US market at an interest rate of 9.40% per annum maturing April 1, 2021.

Comparative Statistics

for twelve month period ended March 31

	1991	1990	1989	1988	1987
Electric Energy Generated & Purchased (Million kWh):					
Generated (net)	**8,907.0**	9,169.8	8,439.4	7,655.5	7,168.9
Purchased	**510.6**	137.5	295.2	515.2	554.2
	9,417.6	9,307.3	8,734.6	8,170.7	7,723.1
Losses & Internal Use	**743.3**	862.0	678.3	732.8	715.2
Total Electric Energy Sold	**8,674.3**	8,445.3	8,056.3	7,437.9	7,007.9
Energy Sales Billed (Million kWh):					
Domestic Service	**3,267.9**	3,206.8	3,049.9	2,782.6	2,659.9
General Service	**2,356.0**	2,291.7	2,185.5	2,030.8	1,931.4
Industrial Power	**2,758.0**	2,390.4	2,380.5	2,227.2	2,097.9
Municipalities	**244.7**	242.7	235.9	223.1	212.1
Unmetered Services	**84.4**	82.2	79.0	76.2	74.2
Total In-Province Billed Energy Sales	**8,711.0**	8,213.8	7,930.8	7,339.9	6,975.5
Increase (Decrease) in Unbilled Sales	**(43.4)**	(10.3)	104.4	68.6	31.5
Grid Sales	**6.7**	241.8	21.1	29.4	0.9
Total Electric Energy Sales	**8,674.3**	8,445.3	8,056.3	7,437.9	7,007.9
Energy Revenue Billed (Million $):					
Domestic Service	**$266.2**	$253.2	$226.3	$208.6	$200.1
General Service	**196.9**	186.6	171.2	159.7	151.9
Industrial Power	**139.2**	119.4	113.1	105.4	100.0
Municipalities	**14.0**	13.5	12.2	11.5	10.9
Unmetered Services	**13.8**	12.8	11.6	11.2	10.8
Total In-Province Electric Revenue	**630.1**	585.5	534.4	496.4	473.7
Increase (Decrease) in Unbilled Revenue	**(2.3)**	3.0	6.3	4.4	2.3
Grid Sales	**0.2**	7.3	2.7	1.9	0.0
Total Electric Revenue	**$628.0**	$595.8	$543.4	$502.7	$476.0
Average Unit Revenue per kWh Billed:					
Domestic Service	**8.15¢**	7.90¢	7.42¢	7.50¢	7.52¢
General Service	**8.36¢**	8.14¢	7.83¢	7.86¢	7.87¢
Industrial Power	**5.05¢**	5.00¢	4.75¢	4.73¢	4.77¢
Municipalities	**5.70¢**	5.54¢	5.18¢	5.17¢	5.14¢
Unmetered Services	**16.42¢**	15.54¢	14.66¢	14.66¢	14.55¢
All Classifications Combined	**7.23¢**	7.13¢	6.74¢	6.76¢	6.79¢
Number of Employees	**2,556**	2,483	2,460	2,420	2,383
Number of Customers	**395,577**	389,370	381,507	373,594	364,673
km of Transmission Lines (69 kV & Over)	**5,004**	4,904	4,872	4,866	4,862
km of Distribution Lines (25 kV & Under)	**24,243**	24,017	23,701	23,503	22,620
Cost of Fuel (Million $) - Coal	**$150.3**	$158.3	$156.4	$154.0	$144.6
- Oil	**70.5**	66.8	49.8	45.1	28.8
Total	**$220.8**	$225.1	$206.2	$199.1	$173.4

Nova Scotia Power Corporation
Corporate Information
1991

Board of Directors

Left to right: J.G. MacDonald, Sydney; R.A. Damery, Bridgewater; C.J. Creighton, Dartmouth; C.S. Smith, Liverpool; L.R. Comeau, Halifax; B.L. Woodworth, Wolfville; G.J. McCulloch, Halifax; G.R. Elliott, Amherst; M.B. Walker, Halifax; A.F. Bruce, Truro; J.A.F. MacDonald, Q.C. Chairman, Halifax. Absent from the photograph is G.D. Macdonald, New Glasgow.

Officers

Left to right: G.D. Lethbridge, Vice President of Engineering and Production, R.J. Smith, Secretary and Senior Solicitor, T.F. MacDonald, Vice President of Planning and Environment, L.J. Sweett, Vice President of Customer Services, L.R. Comeau, President and Chief Executive Officer, W.L. Fraser, Vice President of Personnel and Corporate Services, G.K. Ockle, Vice President of Finance.

COMMITTEES OF THE BOARD OF DIRECTORS

Audit Committee

C.S. Smith, Chair
A.F. Bruce
G.J. McCulloch
G.R. Elliott
G.K. Ockle
L.R. Comeau, Ex Officio

Compensation Committee

G.J. McCulloch, Chair
A.F. Bruce
R.A. Damery
J.G. MacDonald
L.R. Comeau, Ex Officio

Centennial Scholarship Selection Committee

A.F. Bruce, Chair
L.R. Comeau, Ex Officio

Pension Committee

M.B. Walker, Chair
C.J. Creighton
R.A. Damery
W.L. Fraser
G.K. Ockle
B.L. Woodworth
L.R. Comeau, Ex Officio

AUDITORS

Peat Marwick Thorne
Halifax

BANKERS

Bank of Nova Scotia
Royal Bank of Canada

SOLICITORS

Cox, Downie & Goodfellow
Halifax

TRANSFER AGENT AND REGISTRAR

Corporate Trust and
Debt Administration Department,
Nova Scotia Power Corporation

F DIRECTORS

AR

Operations Map

Zones

- Eastern
- Central
- Halifax
- Western

Atlantic Ocean

Boundaries

- Zone
- District

Offices

- Zone
- District

NORTH

100 Kilometres

Maccan
Windsor
Burnside
Tufts Cove
Annapolis
Bear River
Halifax
Liverpool
Tusket

System Map

Transmission Lines

- 69 kV
- 138 kV
- 230 kV
- 345 kV

Atlantic Ocean

Plants

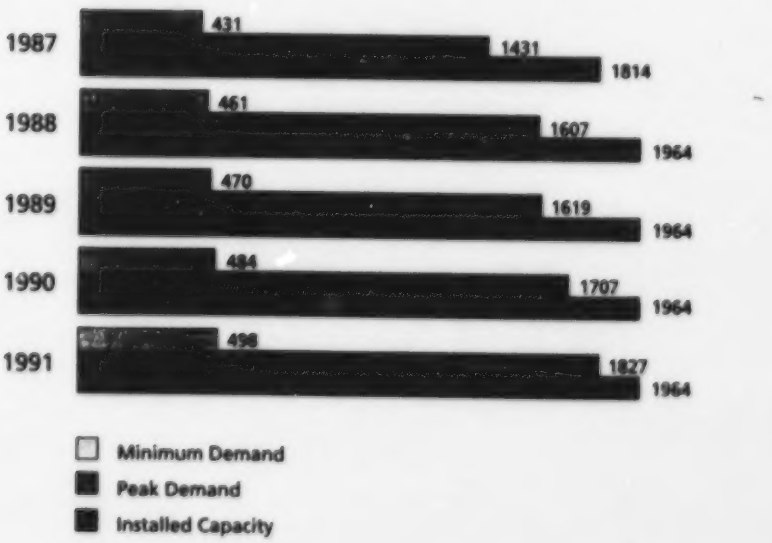
- Hydro
- Municipal Utilities
- Steam
- Gas Turbine
- Tidal
- Wind Turbine

NORTH

100 Kilometres

Generation Statistics

	Installed Capacity in MW	1990–91 Generation (Million kW.h)
Steam		
Lingan	601.8	3879.5
Tufts Cove	350.0	2203.3
Trenton	190.0	875.0
Point Tupper	150.0	980.6
Glace Bay	96.0	240.2
Maccan	15.0	28.3
	1402.8	8206.9
Gas Turbine	179.8	13.8
Hydro		
Total 33 Plants	361.9	1159.5
Tidal	19.5	27.2
Wind Turbine	0.3	0.1
Total Capacity	1964.3	
Total Generation		9407.5
Less: Station Service		500.5
Net Generation		8907.0
Purchases		510.6
Inter-Provincial Sales (to NBEPC)		(6.7)
Net Requirement		9410.9



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